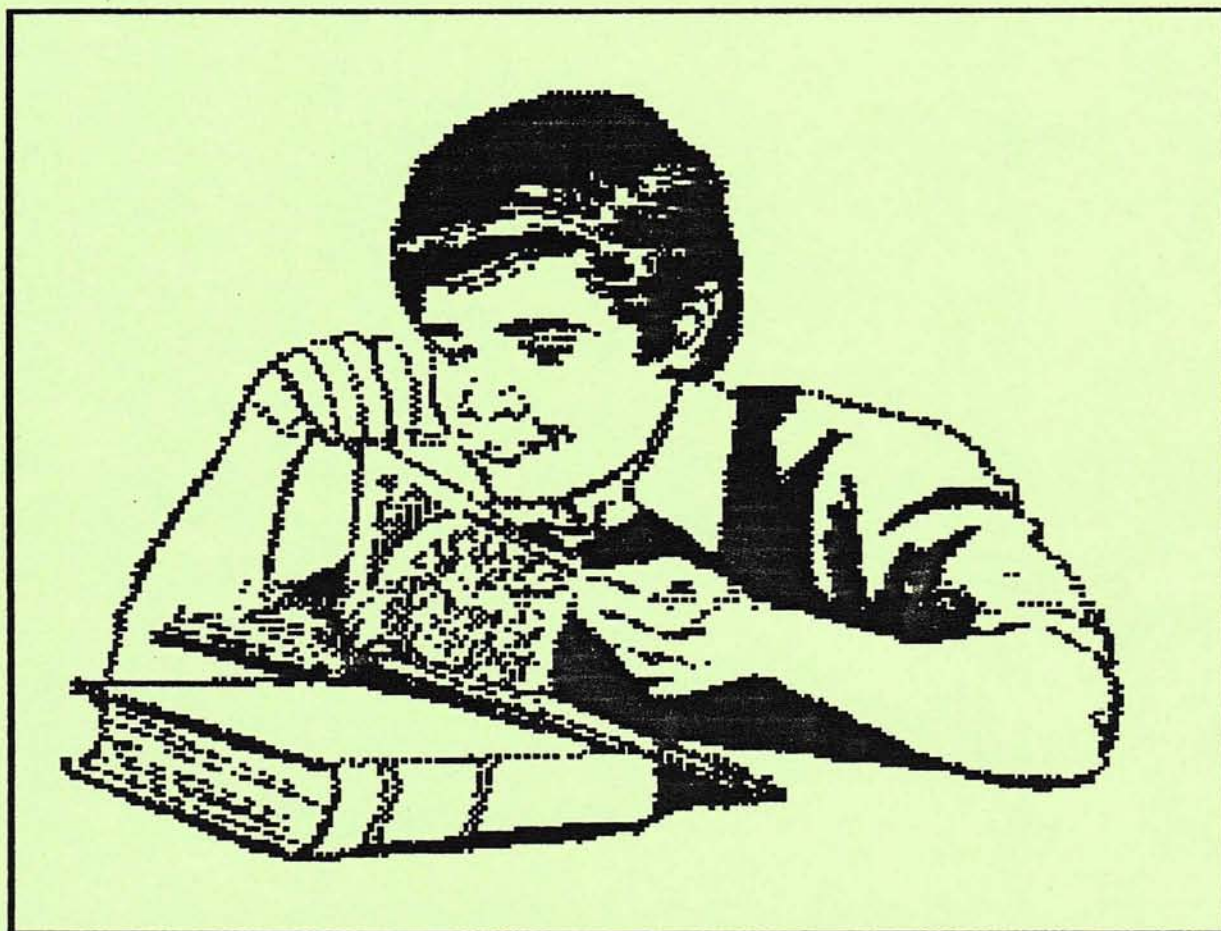


# KEEPING PACE

# PITTSBURGH ATARI COMPUTER ENTHUSIASTS

September 1987

Price \$2.50

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## NOTICE

Keeping PACE is the official publication of the Pittsburgh Atari Computer Enthusiasts. If you enjoy Keeping PACE and would like to receive it regularly you must do one of two things:

1) Become a dues paying member by filling out the form in back of this issue and by sending a check or money order to PACE at the address on the form in the amount of \$20.00 (per yr./family). Membership is open to individuals and families who are interested in using or programming Atari personal computers. Membership includes the subscription to this monthly newsletter, access to the club's disk library and to all club functions and discounts.

2) If you are an Atari User Group you will continue to receive Keeping PACE if we receive your newsletter on an exchange basis at the address on the form. Also we are interested in exchanging Disk Libraries of PUBLIC DOMAIN PROGRAMS.

### NEWSLETTER ARTICLES:

Please submit all articles on disk to any of the PACE Officers. Articles may also be uploaded directly to the Editor (412)-941-4107 or the P.A.C.E. Bulletin Board (412) 963-1355.

PACE accepts articles for publication in a variety of formats. Articles may be submitted anytime but will probably not make that month's newsletter if submitted less than two weeks before the regular meeting date. Text files on single sided ST disk and uploads to the PACE BBS are the preferred means of submission.

Due to limitations placed on the use of the meeting room, any retailer wishing to sell products at a P.A.C.E. meeting must register with the President or Vice President one month prior to the meeting. Stipulation for such sales will be explained and will be adhered to. PACE reserves the right to limit space to retailers and others at all meetings.

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## bv

Lanny Shoup

If any member has any questions about the club, Atari, or any related items please feel free to let me know. You can drop me a line through our BBS, or our Post Office box, or phone. Any suggestions to help us provide you, our members, with what you are looking for in the club are always welcome.

This will be your last month to receive ACE money for new members. The PACE money offer will end September 30, 1987. Let's all make an effort to bring a new member in this month.

I'd like to make a special thank you to all members who have already taken the time and effort to bring in new members for PACE.

A new operating system for the Atari ST called IDRIS 3.11 may be a sleeper for Atari. This operating system is a UNIX work-alike. With its multi-tasking ability it may be just the ticket to help push the business community from viewing the Atari ST as a toy.

We are looking for new eight bit programs to demo. If anyone has any they would like to show, please see me or Dave Carey. Any older programs that haven't been demonstrated for a while are also welcome.

A new concept for a pay BBS has been introduced to us by Computalk TCS of Ft. Worth, TX. They have been in business for six years for Atari owners. They provide the following services:

Downloads - 8 & 16 bit  
E-mail  
Nine online adventures  
Users' forums  
CB simulation

You have the opportunity to try this BBS for one month free. After the one month there is a \$10.00 monthly fee for the user group. This fee is usually \$15.00 a month. There is no sign up or hourly fee. They

have 6 phone lines, run 24 hours a day, 300 or 1200 baud, and can be reached through PC Pursuit.

To log on:

- ```
* Set at full duplex
* Set baud to 300 or 1200
* Call (817) 589-2588 (area code (214)
  when using PC Pursuit)
* Remember this is long distance to
  Texas
* Computer will respond "Welcome to
  COMPUTALK TCS, hit (RETURN)"
* Our ID# is 2500
* Our password is USER/200
```

This offer will expire 9/18/87

The Boston Computer Society will be holding an Atari fair on October 9, 10 and 11 at the Centrum in Worcester, MA. They are expecting 10,000 in attendance and 87 booths.

The Washington (NOVATARI) have changed their October 10 fair to fit Atari in. They have also changed their location. Both the dates and the location are unknown to me at this time.

Well, that's all for now. See you in September.

[illegible]

## BOARD CHECK

bv

By  
John Babson

This month I went to Cape Cod for vacation, and while there I was able to meet with two user groups and exchange library disks. I met with Cam Laing and Tom Arena of the M.E.N.A.C.E. (METro Network Atari Computer Enthusiasts) use group in Waltham, Massachusetts. They are primarily 8-bit based, and Tom is particularly interested in AMS and Midi music programs. I met with these same people last year, and this is how we got many of the AMS programs in our library. Tom now has over 800 different AMS files, and now we have even more to add to our library. All told, I got about 10 disks full of 8-bit programs and, hopefully, many are new to our group. If anyone in the group is interested in AMS/Midi programming



on the 8-bit computers I suggest you contact Tom. He is an accomplished musician and 8-bit programmer. Let me know and I will give you his address or phone number.

I also met with Alan Glick and David Scheibley of J-BUG. J-BUG is putting on the Northeast Atari Computer Faire in Worcester, Massachusetts on October 10 and 11. They are expecting to have over 3000 attendees and have already signed up 11 vendors. They are planning a show many times larger than ours and are getting help from A.N.A.L.O.G. and others. It looks like they have their act together and are going to have an excellent show. J-BUG has about 600 members and an excellent 16-bit library for the ST. We swapped disks and I came home with 26 ST disks full of many programs that we have not seen.

It will take a while for our librarians to sort out the best of all these new programs and put them on library disks. I will be putting some of these new programs on the BBS as soon as I can, also. We now have nearly all 20 megs of our hard disk on the BBS filled with 8-bit and 16-bit programs. While we are looking into the possibility of economically increasing the capacity of the BBS, I will be removing some of the older programs on the BBS to make room for the new programs. Any suggestions as to programs you would like to see on the BBS (or removed from the BBS) will be helpful.

I am also trying to set up a program whereby we exchange programs with the Sysops of other Atari user groups to maximize the amount of quality public domain software in our library and on the BBS. Nonetheless, if you have public domain programs, please upload them and share them with our other members.

[illegible]

# LOOK

MEMBERSHIP DRIVE  
UPDATE

by  
Joyce Thompson

We've been doing very nicely in the Membership Drive. The tally of new members: May - 3, June - 6, and July - 4. That's 13 new members!! Good going all of you sponsors! We also had a number of renewals: May - 5, June - 9, and July - 9...And that's 23 renewed members. That's real good, also.

The membership drive extends through the end of September, so you still have time to bring a friend in to join up. Remember, if you as a member sponsor a new member you will receive \$5 in PACE Money. You can use

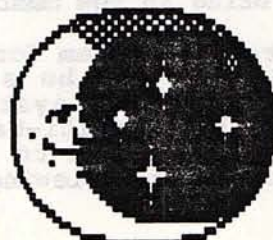
**PAY** Money to buy library or blank disks or raffle tickets and to pay dues. Don't miss out on saving money.

FOOTNOTE: Just as a reminder to those of you members that need to renew...The Board's decision at the beginning of the membership drive included not ZAPPING any member during the drive, from 5/1/87 to 9/30/87.

Now, anyone who has received one of my cute postcards knows what ZAPPING means. I first send out a reminder-to-renew postcard and then give you a month or two. The next postcard you would receive would be my postcard starting with "Dear Former PACE Member". I hate sending those, because in between the two postcards I have had to ZAP that member. ZAPPING occurs 2 to 3 months after your membership expires. We give you this grace period hoping not to lose a member and friend, but eventually it must be done.

So, I just want to remind any member that needs to renew (check your status on your mailing label), please do it by the end of September, because ZAPPING will begin again in October. Renewal postcards will be in the mail shortly. Please...renew now and save me from ZAPPING you. I really don't like to ZAP anyone.

Joyce Thompson  
Treasurer and Membership Director

[illegible]

# FLYING HIGH WITH ATARI

by Italo Gavazzi  
reprinted from High Sierra Users Group  
Journal, June 1987

Recently, being an amateur astronomer, I attended the Riverside Telescope Makers Conference in southern California. This annual conference is a great place to see the latest trends in amateur astronomy. One of the most interesting innovations was the use of an Atari 800 to control the movements of a home-made telescope by means of stepper-motors. The program was written in BASIC. The co-ordinates of a star or celestial object were fed into the computer--and, presto--the telescope pointed to the object in the sky. Now, there's a practical application for computers that interests me.



## REVIEW OF REGENT BASE

by Serge Vaillancourt  
reprinted from Michigan Atari Magazine,  
July 1987

REGENT BASE just became the fourth database that I have used (or tried) on the ST. The first was the obvious DB MASTER ONE, given to me with the purchase of my 520ST. Even though it used the GEM features, it quickly found its way into my "archives". Not that it was unusable, but mainly because it didn't match my needs. The second was H & D BASE. This one is close enough to a professional database and what's more, it is very similar to DBASE II that is so well known in IBM circles. Not bad, but the first versions were buggy. DB MAN is the third, a DBASE III clone. "Now, here's something interesting," I said to myself as I adopted it.

The first things I look for in a database are:

- Ability to work with many databases simultaneously;
- Inter-relation capacity between databases;
- Ability to create procedures;
- Printed output format editing and designing;
- Possibility of saving variables.

DB MAN satisfies all these requirements. REGENT BASE is not as flexible but nevertheless includes a good portion of these features. AND it's much easier to use.

On the plus side, REGENT BASE runs under the GEM environment and even the user created databases can make use of GEM (mouse button). REGENT BASE then allows for a better screen layout and a much improved working space for the end-user.

Another plus for REGENT BASE: it has its own integrated text editor. With DB MAN, we have to use a separate editor. To run a program or procedure, one must load DB MAN in memory and then run that program or procedure. If there was an error, you have to load the editor, make your corrections, re-load DB MAN, re-run, etc... With REGENT BASE, after you've written the program or procedure, you can call the processor and run the program immediately. In the case of an error, REGENT BASE brings you back to the editor with the cursor resting on the mistake.

REGENT BASE is sold with a 163 page manual in a 9" x 8" binder, which is very convenient with an inside pocket where you find the REGENT BASE diskette. The diskette contains the REGENT BASE programs as well as two complete applications that may be used as tutorials, but since they're so good, they will be very practical for some users.

The manual is split between three chapters and the index.

The first chapter called "GETTING STARTED" gives the information needed for a first run of REGENT BASE. It also contains a mini-manual for each one of the applications included in the package.

The manual is written in a reference book form (except for the first chapter) and those looking for a tutorial in the book will be deceived. People who have never used a database will have to read certain passages a few times and maybe even look for other information sources. But in general, the various items in the manual are clearly identified and you won't need to look around for a day and a half to find a desired passage.

The FORM EDITOR allows you to create or modify the database templates and the commands needed to activate it. The FORM EDITOR is made of two parts; one for creating fields and for the screen presentation, and the second which is nothing more than a text editor used to create the programs and procedures.

The first part is called the GEM OBJECT EDITOR and is used to create the design and the contents of the file. There are drop menus containing the various editing tools such as CUT, PASTE, the file manipulations, LOAD, SAVE. A sub-menu for designing the screen output contains the text effects and colors tools. Another sub-menu allows you to move between both parts of the FORM EDITOR.

The fields are edited with the help of the mouse to select the type of field (by clicking), position the field (by dragging) and to select the width of the field (by stretching the field's box).

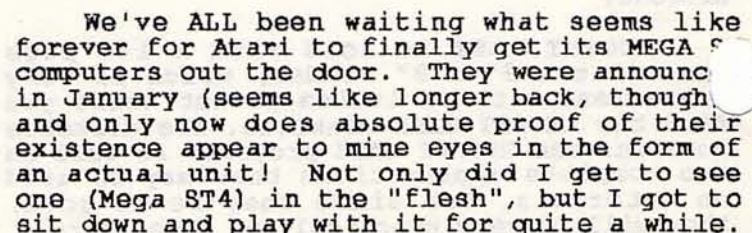
## CONCLUSION

If I compare it with my preferred database program (DB MAN), I can say that REGENT BASE lacks a bit of flexibility, meaning that DB MAN has a much larger language and is therefore capable of more detailed processing. However, I'm attracted by two things in REGENT BASE. It supports GEM in its working tools and also in its applications, and even though its language is less evolved than DB MAN's, it is no less efficient and easy to use.

Consequently, I don't think I would be making a mistake by saying that the casual users have enough power to work with in REGENT BASE for their personal management. It might even be powerful enough for various professional users.

REGENT SOFTWARE  
7131 Owensmouth, Suite 45A  
Canoga Park, CA 91303  
(818) 882-2800







In fact, I ran something like 10 programs on it. My thanks to Neil Harris of Atari and Rod Coleman at Cimmaron Computers in Reno, Nevada, for the opportunity to play with this long sought machine. (Now, DON'T go calling Cimmaron and expect to order one, because as of this date - July 12 - they don't have them yet. The one I saw was there for a special event and went back to Atari HQ several hours later.)

#### THE SYSTEM UNIT

This hasn't changed since the photos we've all seen. The main unit is a box, about 13 x 13 inches square and about 3 inches tall, with a double-sided 3.5 inch floppy drive in the front of the machine to the right. Interestingly, all systems lights on the unit I saw were GREEN. No red LEDs. The right side of the unit is blank, though the left side has an opening which reveals the connector for the keyboard cable just forward of the cartridge slot. Around the back of the unit are all the usual ports, and one interesting hatch, arranged as follows ("R" is the RESET button):

|        |         |                      |                    |
|--------|---------|----------------------|--------------------|
| ON/OFF | POWER   | PROCESSOR BUS ACCESS | ATARI              |
| MODEM  | PRINTER | MIDI MIDI            | MONITOR FLOPPY DMA |

The interesting hatch is, as we've all been hoping for, an open line to a connector which gives access to the FULL 68000 bus, thus permitting simple memory expansion, and even the possibility for carrying the bus OUTSIDE the ST to where things like card slot equipped expansion boxes, multifunction peripheral boards, etc., can be added. Next to it, where I typed ATARI, is a small nameplate, which one magazine claimed was where a second DMA port could be added. I do not know if this is true. Finally, the Mega has a very quiet internal fan and a built-in battery backed up clock. I'd forgotten about the clock, but when one of my disks auto ran a program to read the clock, I was surprised to see that it worked.

#### THE KEYBOARD

This is nearly the size of a 520ST, though slimmer and MUCH lighter. The keyboard is connected to the system unit by a cable which connects in a notch under the back left corner of the keyboard, which is where port 1 (joystick) is also located. The mouse port (0) is in a notch under the center of the back of the keyboard. There is a narrow "channel" for the mouse cord to follow, leading out the right side of the keyboard. If you are left handed, you simply ignore the channel, lead the cable out the back of the notch, and it will easily go around the left side of the unit. These ports are much easier to get at than those on the 1040ST! The keyboard also has two flip out panels on its bottom, which are used to tilt the keyboard toward you. When closed the keyboard lays quite flat. As to

the keys themselves, they don't look any different, but they definitely ARE much tighter. It's not nearly so easy to trigger a key by brushing it. Even the function keys don't feel "mushy".

#### THE NEW TOS/GEM

Perhaps "improved" is a better word. The Desktop looks just like always. Same old stupid icons. The menus are the same, with the exception of the Options menu, where at the very bottom is an option called "Blitter"! If a check mark appears next to it, the blitter chip is ON, if not, it's inactive (more on this later). The Print Screen and Save Desktop functions now present Alert Boxes confirming if you wish to proceed or cancel. You can't set a drive for saving the Desktop to, but at least this will prevent you from accidentally overwriting your current DESKTOP.INF file (which I seem to do about half the time I aim for "Set Preferences"). The first thing I tried was typing an underline in the time/date area of the Control Panel, and much to my relief, I WASN'T greeted by the three bombs which usually accompany this action with the old TOS. In fact, my best efforts proved insufficient to crash this machine. No file or I/O error I created caused a bomb. Hopefully, this is a good sign. Neil Harris stated that the text handling routines had been overhauled, and even sans blitter, the text in windows seemed a bit quicker scrolling. Further, holding down the left mouse button when clicking on a window's scroll arrows or the gray areas of a scroll bar will result in an auto-repeat scroll. No more multiple clicks to scroll through a window. 1st Word benefitted from this, and when the blitter was engaged, seemed faster at going from end to end in a large file.

#### THE BLITTER!!!

I have been DYING to try this out for ages! Anyway, it's present in the Mega, and, by golly, it DOES work! On the Desktop it seems to speed up window fills and screen redraws, though it's hard to tell. The "pop" of appearing and disappearing windows is the same, though I imagine that's because the routines are timed to one of the system clocks. Many users have voiced worries that the blitter would cause some of their programs to go crazy with speed. I found this shouldn't be much of a problem. I tested Starglider, Star Raiders, Crystal Castles and Battlezone, and all ran as always. Apparently, they too monitor system clocks, and are unaffected by the blitter. Maybe you're disappointed by not getting to play Star Raiders at Warp 45, but it keeps the games playable. However, the best example of the blitter at work was when the good old NEO Bird demo was run. If you have it, run it, and notice how fast the cockatoo goes. Now, imagine him going between 4 and 5 times that speed and you can imagine what



you pay them an additional \$2.00 which they turn over to Telenet.

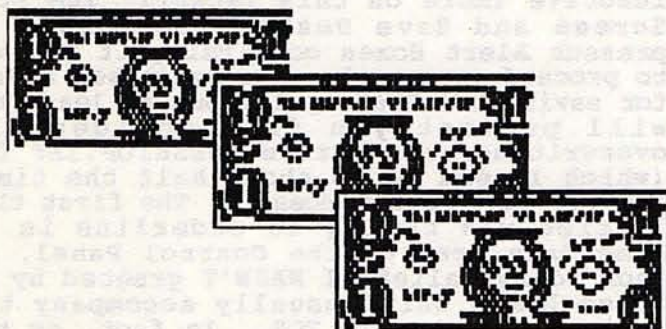
The packet switching network rents these lines from the phone company and is able to pass the cost on to thousands of computer users because data transmission requires a narrower bandwidth on a telephone line than voice transmission. Up to a dozen data transmissions can be multiplexed on a single line that can carry only one voice communication. When you are connected to a database and type something on the keyboard, the packet switching networks computer collects the data from you, gives it a source and destination number and sends the packet on via the most direct route that's open; the next block of data you send may take an entirely different route (that's why databases are sometimes slow to respond to your input...on a busy night the data may travel halfway around the country before it reaches its destination). All this is done to ensure the maximum use of the phone lines while you are pondering what to do next.

The new FCC ruling, which will go into effect on January 1, 1988 will charge packet networks the same access fee that long distance carriers like Sprint, MCI and ATT pay to the local telephone company. In the past the FCC had exempted data transmission networks from this fee (and some still are) but now they feel that to continue the exemption would amount to a subsidy of these networks at the expense of the average telephone user.

There are two points to be made against the FCC's position. The first is that while they discontinue the exemption for packet networks (and indirectly modem users who will absorb the higher cost) they continue the exemption for large private networks like those run by the Ford Motor Company and Boeing Aerospace even though they make use of the same local telephone lines. The second point is that since up to twelve data transmissions can occupy a single phone line, the local phone company will be collecting up to 12 times the revenue from packet switching networks that they collect from voice transmission. Clearly, the new FCC regulations should be modified to charge on a per line basis rather than a per user basis, so that 12 users on the same line are not paying the same per hour fee (\$5.40 per user or \$64.80 per line) as a single user on a voice transmission line.

The Chairman of the FCC, Dennis Patrick, claims that exempting the packet switching networks amounts to a subsidy at the expense of the average telephone user, but the FCC has also stated that the access fee should decline in a few years as the agency increases residential charges for connecting to the telephone network. So the question remains just who is subsidizing whom?

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by Jim Stokes  
reprinted from RAMBANK, Vol. 4 1987

Recently the Federal Communication Commission has proposed to establish an access fee for packet switching networks (in Lancaster, Tymnet and Telenet). What this means is that the cost of accessing Compuserve, the Source, Delphi and Genie will dramatically increase. The new regulation is expected to raise the cost of using Tymnet and Telenet from \$2. to \$7.40 an hour. This means after the new fees are installed the cost of using Delphi will jump to \$13.40 and the cost of Compuserve will jump to \$20.15 an hour. EVEN IF YOU DON'T OWN A MODEM THIS NEW REGULATION WILL HAVE SOME EFFECT ON YOU since this is where much of our public domain programs come from. The people who download this material will need to cut back on the amount of time they are on-line and so there will be fewer submissions to our club library.

## WHAT IS A PACKET SWITCHING NETWORK?

What a packet switching network does is allow you to access a database in a distant city without paying long distance phone charges. Instead you pay the service you are using an additional \$2.00 an hour which they turn over to the packet switching network you have accessed. For Example, to use CompuServe you dial the local Telenet number, type CIS (for CompuServe Information Services) and you are connected to CIS. You pay \$12.75 (1200 baud) an hour for CIS and

[illegible]





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**MAY 1 ————— SEPT. 30**

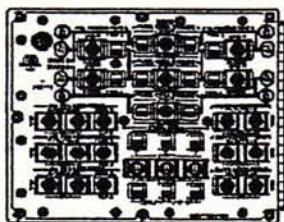
All current members (based on published membership list found in the March newsletter) are eligible for \$5.00 PACE MONEY for each new paid membership obtained. When you fill out your new member's application remember to add:

Sponsored by           (your name)          .

PACE MONEY earned may then be used by you to buy disks or raffle tickets or to apply to your dues.

Past members whose dues have expired since Dec. 1, 1986 and your own renewals are ineligible.





## PC BOARD DESIGNER

by Paul Machiaverna

reprinted from JACG

June 1987

Are you into electronics as a business or a hobby? Do you design and build circuits? Do you layout your own printed circuit boards? Well, then here is a software package written just for you. PC Board Designer (PCBD) is a professional computer aided design package for the Atari ST line of computers. Using a computer for the tremendous task of designing PC board layouts has been around for quite some time, but it was only available on very expensive machines. Abacus software has changed that by bringing us the PCBD. They state in the user manual that they chose the Atari ST computers for this software because of the great power available. My experience in electronics taught me just how tedious it is to layout even the simplest of PC boards. So, with that in mind and a great machine like the ST at my fingertips, I shelled out over a hundred bucks for the PCBD and this article tells about using the package.

In using a computer for PC board layouts, you input a list of all components in a circuit and the connections to be made.

Then you place the components on the desired board size. With PCBD you can usually stop there and let the program do the rest. What I am referring to is Auto-Routing, the most powerful feature. Auto-Routing is where the computer itself places the traces on the PC board layout. The traces are the physical connections between the components. I have seen several PC board designer programs available for the IBM and Apple computers which cost well over \$500 and they don't include this feature. Those programs are nothing more than CAD programs which require your making all the routes of the traces. This is not so with PCBD as I mentioned above. Manual routing is, however, also available in case you are not satisfied with the route of the trace made by the Auto-Router.

All components used on the PC board must be part of a disk library file. Abacus supplies a file with most of the commonly used ones. A separate program is on the main disk to enable you to define components which are special to your needs. You simply create a totally new component or modify an existing one and save it to disk. The library file contains all graphic and pinout information about each individual component. The graphic is what you would see painted or inked on any professionally produced PC board. Once you have listed all the components you are ready to input the connection list.

The connection list is what informs the program how the components are to be connected. For example, pin 1 of IC3 is connected to pin 8 of IC1, and so on. When entering the connection list the computer will alarm you if you are trying to make an impossible connection. This is when you enter a component not on the component list, or if you specify a nonexistent pin on an IC chip. What you must be very cautious about is that you don't enter an incorrect, yet legal connection. The program is not able to recognize that you entered a connection different from the one made on the schematic.

Once the connection list is complete it is time to actually place each component on the PC board. The PC board is shown on the screen in perfect scale and size as defined by the user. In this mode you really get to see the power the ST has underneath its cover. Let's say we are to position a 40 pin IC chip on our board. On the screen we see the IC graphic as well as every connection made to it going to other components. Each line coming off the IC is in 'rubber-band' mode as you move the chip to desired location on the board. With this many lines coming off a component it looks like a Man O'War crawling across the screen. What is truly amazing is just how fast you can move the chip across the screen and also change its angle of degree without any screen flicker. So, component placement is fast, easy, and not hard on the eyes.

Now that you have input all the required data in the form of a component list, connection list, and board placement, it's time to sit back and watch the computer do the hard part -- Auto-Routing. You see each connection being made on the screen as you think to yourself, 'Would I love to see the algorithm for this!' The Auto-Router is very fast. Soon after you start the process you will see a complete and perfect PC board layout of the schematic circuit you entered. At this point it is a good idea to save the lists and the PC board design to disk. This way should you ever need to modify the design you won't have to enter all the components and connections all over again.

PCBD produces very well detailed hardcopies of the PC board layouts as well as a component layout picture suitable for transferring to the actual PC board. Remember that you now have to etch the PC board itself. The hardcopies are useful for snapping a picture of the layout and using photo sensitive copper clad boards for the design transfer. I have used two different printers for my layouts; an Epson FX-85 and an Epson LQ-1500. The results from the FX are good, but the LQ is fantastic. Each trace on the LQ is well defined with a minimum of 'fuzziness' associated with most dot-matrix printers. There are also drivers for plotters.



THE SOUNDING BOARD ..... Where one's  
opinions can be expressed even if no one  
wants to hear them.



BOARD OF EDUCATION ..... Consists mostly of  
tutorials, documentation, instructions, etc.

THE BORED BOARD ..... Nothing EVER happens here!

THE SKATE BOARD ..... Appeals to the younger, more mobile user.

OVER BOARD ..... This one has so many introductory graphics, messages, and plugs you use up half your time just getting to the menu.

THE SURF BOARD ..... This one's a lot of fun... Only thing is, it's located in Hawaii... Can you say "Aloha!!" to your paycheck as it goes off to the phone company? Sure you can...

THE RUNNING BOARD ..... BBS for collectors  
of old cars, with a sub-board for loggers. -

BOARDWALK ..... Pay board with a \$400 access fee. And that doesn't do you any good without access to Park Place BBS. (Access \$350)

THE DRAFT BOARD ..... Used by Eynon to get users involved in his pet projects.

THE DRAFTING BOARD . . . . . The most intelligent, well-run board so far. Run by raftsmen for the betterment of mankind. (Guess what the author does for a living...)

THE GAME BOARD ..... On line games, more on  
line games, and when you're done with the on  
line games, you can play some on line games!

BOARD OF INQUIRE ..... You have to pass two oral exams, a special sub-committee hearing, know 3 of the directors, and sign sworn affidavits before you can get access.

OUIJA BOARD ..... I'm not sure who these guys are telecommunicating with, but they're really out there!!

[illegible]

## CHOOSING A COLLEGE?

reprinted from Mile High Magazine, May 1987  
via The W.A.N.D., June 1987

The Perfect College  
Mindscape Software  
\$19.95

The Perfect College is a database program with more than 440,000 facts about 650 accredited four year colleges and universities around the country. The program lets you choose up to 26 criteria, such as cost, major studies, location, student/faculty ratios, and much more. If you, or someone in your family is college bound this fall, check out this program.

## DBASIC UPDATE

DTACK GROUNDED has sent two updated versions of their DBASIC program since the original.

Bring your original disk to a meeting  
and receive the latest update free!

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# SHANGHAI - A REVIEW

by Jim Woodward

reprinted from The I/O Connector, July 1987

This game is based on Mah-Jongg, an ancient Chinese tile game, and it isn't as easy as it looks. The folks at Activision have put together a really nice little package, with a few minor exceptions.

The object is to find pairs of identical tiles and remove them from the pyramid (five high in the center) in which they are stacked. They are always in different places, thanks to the computer's ability to do random things. 144 tiles. Are you up to the challenge? There are 12 Dragon tiles, 16 Winds, 4 Seasons, 4 Flowers, and 108 Suit Tiles, either Dots, Bams (bamboo), or Craks (characters or actors). They are laid out in a pyramid called a Dragon.

The object is to remove pairs, but that is just part of it. They may only be removed if they can be moved left or right, not up or down. And then, you must make sure that they are on a level which allows them to be moved; then use strategy, think several moves ahead. What will happen if I move this tile?

The game allows for solitary play against the computer, as well as teams competing against each other, in a tournament; or you can challenge a person against the clock. Any game will get the adrenaline flowing. The game also makes good use of the GEM menu bars to restart games, give help, hints and remind you which tiles are which.

I'm not the biggest strategy game player around, but I love this one. It is a very big challenge and very frustrating to find out that you can't move any more tiles. Your strategy didn't work, so you just go to the GAME menu bar and start all over. There's nothing else to do.

My only complaints are that the title screen should have sound, to add to the effect. The sound effects should be much better (they consist of the standard ST fading ding bell, which has been overused so much). And the graphics aren't the greatest.

But all in all, I recommend this program to everyone. Good luck, you'll need it.







For example, to dial a number in "regular" PCP, you would have to type "ATDTXXXXXXX", and then you would see either "CONNECT" or "BUSY". In the "Enhanced" PCP, all you have to type is "DXXXXXXX". Enhanced PCP will tell you what is happening by posting "DIALING...", and then either "BUSY!" (and return you to the command



















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